

# ABOX-5211(P) Series

10th Gen Intel® Core™ 10-Cores i9-10900TE / 8 x GbE (Optional 8 x PoE) / 2 x DP / 4 x USB 3.2 10Gbps / 4 x USB 3.2 5Gbps  
9~60V Input AI Computing

## Features

- 10th Gen Intel® 10-Cores i9-10900TE
- 8 x DI, and 4 x DO and 4 x RS-232/422/485
- 3 x M.2 2280 Key M Support NVMe SSD Storage
- 9 ~ 60V DC Power Input
- Operating Temp.: -40~70°C
- 8 x GbE RJ45 (Optional 8 x PoE )



## Introduction

The ABOX-5211 Series is powered by the 10th Gen Intel® Core™ i9-10900TE Processor and boasts 8 x DI, 4 x DO, and 4 x RS-232/422/485 support. It is perfect for Industrial IoT deployments, with high-performance computing and real-time capabilities certified by Intel® ESDQ (Edge Software Device Qualification) for Autonomous Mobile Robots (AMR). The Intel® UHD Graphics 630 Graphics and single-side I/O panel design, along with 9~60VDC power input, make it ideal for Factory Automation, Service Robots, Cellular V2X, Smart Retail, and any AIoT/Industry 4.0 applications. Moreover, it is suitable for industrial automation, digital signage, outdoor video surveillance, and AGV/AMR. The ABOX Fanless PC can handle all outdoor digital applications and extreme weather conditions with ease.

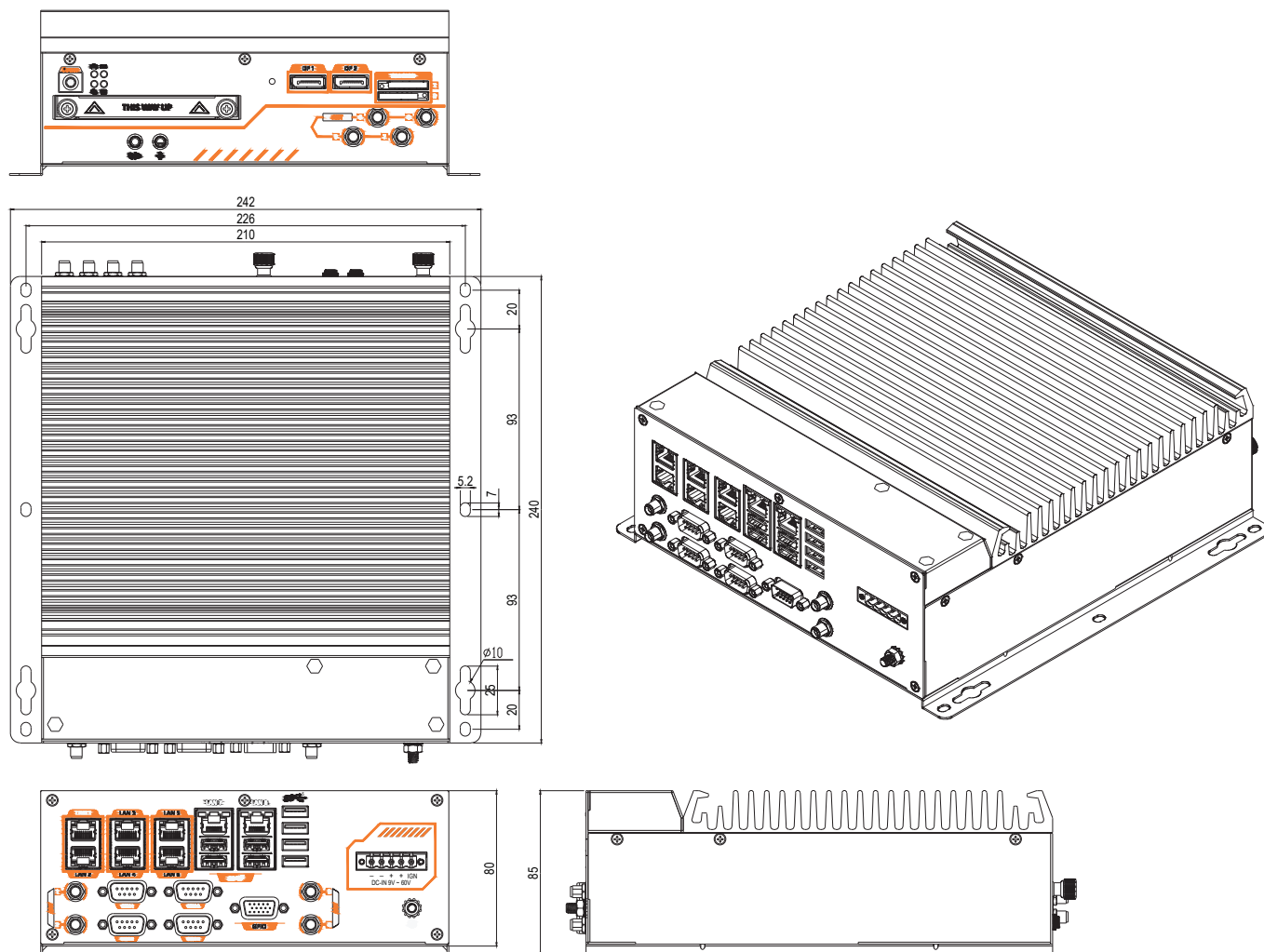
## Specifications

| System        |                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------|
| CPU           | 10th Gen Intel® Core™ i9-10900TE (20M Cache 2.0GHz up to 4.5GHz)                                      |
|               | 10th Gen Intel® Core™ i7-10700TE (16M Cache 2.0GHz up to 4.4GHz)                                      |
|               | 10th Gen Intel® Core™ i5-10500TE (12M Cache 2.3GHz up to 3.7GHz)                                      |
|               | 10th Gen Intel® Core™ i3-10100TE (6M Cache 2.3GHz up to 3.6GHz)                                       |
|               | Intel® Celeron® G5900TE (2M Cache 3.0GHz)                                                             |
| Chipset       | Q470E                                                                                                 |
| Memory        | 2 x DDR4 3200MHz SO-DIMM up to 64GB                                                                   |
| LAN Chipset   | 7 x Intel i210-AT and 1 x i219LM (support iAMT) Gb/s Ethernet Controllers Onboard Support PXE and WOL |
| Watchdog      | 1 ~ 255 Level Reset                                                                                   |
| TPM           | 2.0                                                                                                   |
| I/O           |                                                                                                       |
| Serial Port   | 4 x RS 232/422/485                                                                                    |
| USB Port      | 4 x USB 3.2 10Gbps and 4 x USB 3.2 5Gbps                                                              |
| LAN           | 8 x RJ45 Ports for GbE (Optional 8 x PoE Total Max. 120W)                                             |
| Video Port    | 2 x DP                                                                                                |
| DIO Port      | 8 x DI (5~60VDC) and 4 x DO (5VDC, 100mA)                                                             |
| Audio         | 1 x Line-out and 1 x Mic-in                                                                           |
| Expansion Bus | 1 x M.2 B Key 3042/3052 for WWAN (USB3.0) w/ Dual SIM Slot                                            |
|               | 1x M.2 A-E Key 2230 Slot for Wi-Fi (PCIe + USB)                                                       |
|               | 2 x Full Mini-PCIe Slots (Support DIP Switch Enabled/Disabled SMBus Interface)                        |
| Mechanical    |                                                                                                       |
| Construction  | Aluminum Extrusion with Steel Chassis                                                                 |
| Mounting      | Wall-mount                                                                                            |
| Weight        | 3680g (Barebone)                                                                                      |
| Dimensions    | 240(L) x 242(W) x 85(H)mm with Wall-mount                                                             |

| Storage                   |                                                                                                                                                                                                                                                                                                                  |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                      | 1 x 2.5" Drive Bay for SATA Type HDD/SSD (Rear Panel)<br>3 x M.2 M Key 2280 PCIe 4x Supported<br>* Thermal heatsink is required for M.2 storage. Please contact sales window for more information.                                                                                                               |
| Graphics                  |                                                                                                                                                                                                                                                                                                                  |
| CPU Built-in Graphics     | Intel® UHD Graphics 630 for i9/i7/i5/i3<br>Intel® UHD Graphics 610 for G5900TE<br>Max Resolution (DP 1.2) : 4096 x 2340 @ 60Hz                                                                                                                                                                                   |
| Software                  |                                                                                                                                                                                                                                                                                                                  |
| Operating System          | Windows 10 64bit, Ubuntu 20.04 64bit                                                                                                                                                                                                                                                                             |
| Environmental             |                                                                                                                                                                                                                                                                                                                  |
| Operating Temp.           | -40°C ~ 70°C w/0.6 m/S airflow<br>*Operating temp. varies by accessories installed.                                                                                                                                                                                                                              |
| Storage Temp.             | -40°C ~ 80°C                                                                                                                                                                                                                                                                                                     |
| Relative Humidity         | 10% RH – 90% RH (non-condensing)                                                                                                                                                                                                                                                                                 |
| Vibration (with SSD)      | IEC60068-2-64, Random, 2.5G@5~500Hz, 1hr/axis<br>MIL-STD-810G, Method 514.6, Procedure I, Cat.4, Operating                                                                                                                                                                                                       |
| Shock                     | Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=15G (11ms) with SSD                                                                                                                                                                                                                 |
| Certifications            | CE, FCC Class A, E-Mark                                                                                                                                                                                                                                                                                          |
| Power Requirement         |                                                                                                                                                                                                                                                                                                                  |
| Power Input               | 9~60VDC Power Input                                                                                                                                                                                                                                                                                              |
| Power Protection          | Automatic Recovery Short Circuit Protection                                                                                                                                                                                                                                                                      |
| Power Mgmt.               | Vehicle Power Ignition for Variety Vehicle                                                                                                                                                                                                                                                                       |
| Power Off Control         | Power off Delay Time Setting by BIOS and Software                                                                                                                                                                                                                                                                |
| Battery Backup (Optional) | Internal Battery Kit for 10 Minutes Operating Patent No. : M447854 - Build-in Battery<br>P/N: BAT-5200 kit, Operating Temp. Charging 0 ~45°C, Discharging -20~60°C.<br>*UPS backup time varies depending on actual overall system power consumption, and battery self-depletion is an inevitable characteristic. |

## Dimensions

Unit : mm



## Ordering Information

|                 |                                                                                                                                                    |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Model Number    | ABOX-5211x-yy<br>(x= P= w/PoE, x= Empty= w/o PoE, yy= i9= i9-10900TE, yy= i7= i7-10700TE, yy= i5= i5-10500TE, yy= i3= i3-10100TE, yy= C1= G5900TE) |
| Description     | 10th Gen Intel® 10 Cores i9-10900TE / 8 x GbE (Optional 8 x PoE) / 2 x DP / 4 x USB 3.2 10Gbps / 4 x USB 3.2 5Gbps / 9-60V Input AI Computing      |
| State of Origin | Made in Taiwan                                                                                                                                     |

## Optional Accessories

|                    |                                                                                                                                                           |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| DRAM               | DDR4-3200 MHz SO-DIMM, 4GB~32GB, -40~85°C                                                                                                                 |
| SSD                | M.2 2280 B-M key NVMe TLC -40~85°C 64GB~1TB w/ Heatsink<br>M.2 2280 B-M key SATA TLC -40~85°C 64GB~1TB w/ Heatsink<br>2.5 inch SATA TLC -40~85°C 64GB~2TB |
| AI                 | M.2 AI Acceleration Module                                                                                                                                |
| Wi-Fi              | M.2 2230 A-E key 802.11 a/b/g/n/ac, Wi-Fi 6E                                                                                                              |
| Modem              | M.2 3042 B key 5G & LTE Module                                                                                                                            |
| GPS                | MiniPCle GPS Module                                                                                                                                       |
| CANBUS             | MiniPCle CANBUS Module                                                                                                                                    |
| Battery Backup Kit | BAT-5200 Battery Kit, 5200mAh, Charge 0~45°C, Discharge -20~60°C                                                                                          |
| Power adapter      | AC/DC 24V Power Adapter                                                                                                                                   |

All specifications are subject to change without notice.